# Curriculum Vitae

Christina Messineo Annunziata, M.D., Ph.D.

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**Date and Place of Birth:** June 25, 1970, Passaic, NJ

**Citizenship:** United States

**Education:**

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| 1992 | Bachelor of Science, magna cum laude, Biology, Georgetown University, Washington, D.C. |
| 2000 | Doctor of Philosophy, Department of Pathology, Georgetown University, Washington, D.C. |
| 2000 | Doctor of Medicine, Georgetown University, Washington, D.C. |

**Training/Employment/Experience:**

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| 1990-1992 | Research Assistant, Laboratory of Diane W. Taylor, Ph.D., Department of Biology, Georgetown University, Washington, D.C. |
| 1994-1998 | Pre-doctoral Candidate, Laboratory of Jeffrey Cossman, M.D., Department of Pathology, Georgetown University, Washington, D.C. |
| 2000-2002 | Resident, Department of Internal Medicine, Georgetown University, Washington, D.C. |
| 2002-2006 | Medical Oncology Fellow, Medical Oncology Branch, National Cancer Institute |
| 2003-2007 | Research Fellow, Laboratory of Louis M. Staudt, M.D., Ph.D., Metabolism Branch, National Cancer Institute |
| 2005-2007 | Clinical Fellow, Medical Ovarian Cancer Clinic, Medical Oncology Branch, National Cancer Institute |
| 2007-present | Associate Clinical Investigator, Medical Oncology Branch, National Cancer Institute |

**Board Certifications, Licenses**:

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| 2001 | United States Medical Licensing Exam<br>Washington, D.C. Medical License |
| 2003 | Board Certification, Internal Medicine, American Board of Internal Medicine |
| 2006 | Board Certified, Medical Oncology, American Board of Internal Medicine |

**Honors/Awards:**

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| 1984-1988 | National Honor Society, Ridgewood High School, Ridgewood, NJ |
| 1990 | Sigma Xi Scientific Research Society, Georgetown University Chapter |
| 1991 | Taylor-Webber Scholarship for exceptional students of Biology, Georgetown University, Washington, D.C. |
| 1992 | Phi Beta Kappa Society, Georgetown University Chapter |
| 1992-1998 | Georgetown University Physician/Scientist Fellowship & Scholarship, Georgetown University, Washington, D.C. |
| 1998 | Finalist, Student Research Days, Georgetown University, Washington, D.C. |
| 2001 | Certificate of Merit, ACP-ASIM Poster Presentation, Uniformed Services University of the Health Sciences, Bethesda, MD |
| 2006 | AACR/ASCO Workshop on Methods in Clinical Research, July 22-28 2006, Vail, Colorado |
| 2008-2009 | Marsha Rivkin Center Scientific Scholar Award ($30,000) |

**Professional Society Memberships:**

American Association for Cancer Research
American College of Physicians
American Society of Clinical Oncology
Gynecologic Oncology Group

**Journal Editor:**

Ovarian Diseases (co-Editor-in-Chief)

**Journal Reviewer (ad hoc):**

American Journal of Pathology
Blood
Cancer
Cancer Research
Gynecologic Oncology
International Journal of Gynecologic Cancer
Journal of Immunology

**Grant Review:**

2008 Multiple Myeloma Research Foundation, Senior's Award

**Professional Activities:**

2005 Fellows Editorial Board, NIH

2005 Steering Committee Member, Fellows and Young Investigators Association, NIH

2006 Fellows Representative, Medical Oncology Branch, NCI, NIH

2006 Course Director, Medical Ovarian Cancer Lecture Series, NCI, NIH

2007 Attending Physician, Medical Oncology Service, MOB, CCR, NCI

2007 Member, Breast and Gynecologic Malignancies Faculty, CCR, NCI

2008 Fellowship Committee, Medical Oncology Branch, CCR, NCI

**Clinical Protocols:**

1. Protocol Chairperson. Phase II Study of Clinical Activity and Proteomic Pathway Profiling of Vandetanib in Women with Relapsed or Refractory Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer. Activated 2007.

2. Protocol Chairperson. A Multi-Institutional Study of Proteomic Evaluation of Epithelial Ovarian Cancer, Primary Peritoneal Cancer, and Fallopian Tube Cancer Patients in First Clinical Remission: Development of a Protein Profile of Relapse. Activated 2005.

3. Associate Investigator. A Phase I Trial of BAY 43-9006 (Sorafenib) and bevacizumab in refractory solid tumors with biologic and proteomic analysis. Activated 2004.

4. Associate Investigator. A Phase II Study of BAY 43-9006 (Sorafenib) and Bevacizumab in Epithelial Ovarian, Fallopian, and Peritoneal Cancer. Activated 2007.

5. Associate Investigator. Phase II Trial of Neoadjuvant Chemotherapy in Sporadic and Neurofibromatosis Type 1 Associated High Grade Unresectable Malignant Peripheral Nerve Sheath Tumors. Activated 2006.

**Mentoring:**

Summer students:

M. Hunter Jamerson (1996) – matriculated Georgetown University M.D./Ph.D. program
Eileen M. Hunter (1997) – matriculated Georgetown University Medical School
Jonathan Gootenberg (2008) – currently attending Montgomery County Science, Mathematics, and Computer Science Magnet at Montgomery Blair High School

## Bibliography

### Articles Published in Peer-Reviewed Journals


1. **Messineo C**, Coupland R, Bakhshi A, Raffeld M, Irving SG, Bagg A, Cossman J. Rearrangement, hypermutation, and possible preferential use of a VH5 gene, VH32, in a Hodgkin's cell line. Hematopathol Mol Hematol. 1997-98;11(1):19-28.
2. **Messineo C**, Jamerson MH, Hunter E, Braziel R, Bagg A, Irving SG, Cossman J. Gene expression by single Reed-Sternberg cells: pathways of apoptosis and activation. Blood. 1998 Apr 1;91(7):2443-51.
3. Cossman J, **Annunziata CM,** Barash S, Staudt L, Dillon P, He WW, Ricciardi-Castagnoli P, Rosen CA, Carter KC. Reed-Sternberg cell genome expression supports a B-cell lineage. Blood. 1999 Jul 15;94(2):411-6.
4. Moscarillo FM, **Annunziata CM.** ECT in a patient with a deep brain-stimulating electrode in place. J ECT. 2000 Sep;16(3):287-90.
5. **Annunziata CM,** Safiran YJ, Irving SG, Kasid UN, Cossman J. Hodgkin disease: pharmacologic intervention of the CD40-NF kappa B pathway by a protease inhibitor. Blood. 2000 Oct 15;96(8):2841-8.
6. Azad N, Rasool N, **Annunziata CM**, Kohn E. Proteomics in clinical trials and practice: present uses and future promise. Mol Cell Proteomics, 2006 Oct;5(10):1819-29.
7. **Annunziata CM,** Davis RE, Demchenko Y, Bellamy W, Gabrea A, Zhan F, Lenz G, Hanamura I, Wright G, Xiao W, Dave S, Hurt EM, Tan B, Zhao H, Stephens O, Santra M, Williams DR, Dang L, Barlogie B, Shaughnessy JD, Kuehl WM, Staudt LM. Frequent engagement of the classical and alternative NF-kB pathways by diverse genetic abnormalities in multiple myeloma. Cancer Cell, 2007 Aug;12(2):115-130.
8. **Annunziata CM,** Kleinberg L, Davidson B, Tchabo N, Gius D, Steinberg SM, Kohn E. BAG-4/SODD and associated anti-apoptotic proteins are associated with aggressiveness of epithelial ovarian cancer. Clin Cancer Res, 2007 Nov 15;13(22):6585-6592.
9. Kohn EC, Azad N, **Annunziata CM**, Dhamoon A, Whiteley G. Proteomics as a tool for biomarker discovery. Dis Markers. 2007; 23(5-6):411-417.
10. Azad NS, **Annunziata CM,** Steinberg SM, Minasian L, Premkumar A, Chow C, Kotz HL, Kohn EC. Lack of reliability of CA125 response criteria with anti-VEGF molecularly targeted therapy. Cancer. 2008 Apr 15;112(8):1726-32.
11. Poruchynsky MS, Sackett DL, Robey RW, Ward Y, **Annunziata C,** Fojo T. Proteasome inhibitors increase tubulin polymerization and stabilization in tissue culture cells: A possible mechanism contributing to peripheral neuropathy and cellular toxicity following proteasome inhibition. Cell Cycle. 2008 Jan 17;7(7) [Epub ahead of print]
12. Azad NS, Posadas EM, Kwitkowski VE, Leil MS, Kotz HR, Minasian LM, Sarosy GA, Premkumar A, McNally D, **Annunziata CM,** Chen HX, Wright JJ, Kohn EC. Combination Targeted Therapy With Sorafenib And Bevacizumab Results In Enhanced Anti-Tumor Activity And Toxicity. J Clin Oncol (in press).

## Articles Submitted and In Preparation

1. Farley J, **Annunziata CM,** Birrer MJ. Novel therapeutics in gynecologic cancers. In: Stack MS, Fishman DA, eds. Cancer Treatment and Research: Ovarian Cancer (in preparation).

2. **Annunziata CM,** Davis RE, Lam LT, Hernandez LF, Hurt EM, Shaffer AL, Staudt LM. *c-Maf* is transcriptionally upregulated by a MAP-kinase-dependent pathway in multiple myeloma. (in preparation).

## Invited Publications

1. Cossman J, **Messineo C,** Bagg A. Reed-Sternberg cell: survival in a hostile sea. Lab Invest. 1998 Mar;78(3):229-35.

2. **Annunziata CM,** Kohn EC. Is there a genomic basis for primary chemoresistance in ovarian cancer? Gynecol Oncol. 2003 Jul;90(1):1-2.

3. **Annunziata CM** and Birrer MJ. Endometrial Carcinoma. In: Abraham J, Allegra C, Gulley J, eds. Bethesda Manual of Clinical Oncology. Media, PA: Lippincot, Williams and Wilkins, 2004 (updated 2008).

4. **Annunziata CM** and Birrer MJ. Vulvar Cancer. In: Abraham J, Allegra C, Gulley J, eds. Bethesda Manual of Clinical Oncology. Media, PA: Lippincot, Williams and Wilkins, 2004 (updated 2008).

5. **Annunziata CM** and Longo D. Hodgkin's Lymphoma. In: Boydiazakis M, Frame J, Lebowitz P, Fojo T, eds. Manual of Hematology and Oncology. New York, NY: McGraw-Hill, 2006.

6. **Annunziata CM,** Roque DM, Azad N, Kohn E. Application of serum and tissue proteomics to understand and detect solid tumors. In: Cancer Proteomics, From Bench to Bedside; Daoud S, ed. Pages 101-120. Humana Press, Totowa, NJ. 2007.

7. **Annunziata CM,** Azad N, Hoskins E, Kohn EC. Chapter 4: Tumor angiogenesis and metastasis. In: Principals and Practices of Gynecologic Oncology, 5th edition. (In press)

8. **Annunziata CM,** Azad N, Dhamoon A, Whiteley G, Kohn EC. Ovarian cancer in the proteomics era. Int J Gynecol Cancer. 2008 Mar-Apr;18 Suppl 1:1-6.

## Invited Presentations

1. "NF-kappaB in Multiple Myeloma." Medical Oncology Branch Friday Lecture Series. Bethesda, MD, March 2005, March 2006.
2. "Cervical and endometrial cancer." Nursing oncology fellowship program. Bethesda, MD, February 2006.
3. "Phase I trial of bevacizumab and sorafenib in solid tumors." 8th International Meeting on Anti-angiogenesis Agents. San Diego, CA, February 2006.
4. "Advanced Ovarian Cancer." Medical Ovarian Cancer Lecture Series. Bethesda, MD, April 2006, Nov 2006.
5. "Rational Therapeutics for Cancer: Applying Molecular Biology to Cancer." Medical Ovarian Cancer Lecture Series. Bethesda, MD, May 2006, Dec 2006.
6. "Grant Writing for Human Translational and Clinical Research (Mock Study Section)."American Society of Clinical Oncology Annual Meeting, Fellows Education Session. Atlanta, GA, June 2006.
7. "Molecular Hunting in Ovarian Cancer." Uniformed Services University of the Health Sciences, Bethesda, MD, November 2006.
8. "Molecular Diagnostics and Therapeutics in Ovarian Cancer." Walter Reed Army Medical Center Gynecologic Oncology Lecture Series, Washington, DC, December 2006.
9. "Cervical Cancer." Demystifying Medicine Lecture Series. Bethesda, MD, February 2007.
10. "Proteomics as a Biomarker Tool for Diagnosis and Prognosis." Cancer Genetics and Genomics: A Workshop for Oncology Nurses. Bethesda, MD, May 2007.
11. "PARP Inhibition in the Setting of BRCA Mutations." Joining FORCEs Against Hereditary Cancer Conference, Tampa, FL, May 2007.
12. "Molecular Targets in Ovarian Cancer." Cornell Veterinary Student Leadership Program, Bethesda, MD, June 2007.
13. "Frequent engagement of the classical and alternative NF-kB pathways by diverse genetic abnormalities in multiple myeloma." FASEB meeting on Hematologic Malignancies, Saxtons River, VT, July 24, 2007.
14. "NF-kB, IKK, and NIK as Therapeutic Targets in Multiple Myeloma." Multiple Myeloma Research Foundation Summit, New York City, September 10, 2007.
15. "NF-kB Signaling in Lymphoid Neoplasia: Deregulation and Targeting." American Society of Hematology Annual Meeting, Atlanta, GA, December 8, 2007.
16. "The oncogene c-maf is upregulated by a MEK/ERK-dependent mechanism in multiple myeloma." 6th International Symposium on Targeted Anti-cancer Therapies, Bethesda, MD, March 22, 2008.

## Abstracts

1. **Messineo C**, Hickey M, Taylor DW. Evaluation of immunoglobulin isotypes in owl monkeys. Sigma Xi national meeting. November 1991.
2. Riley C, **Messineo C,** Bagg A, Bittner M, Reid T, Cossman J. Comparative genome hybridization of single Reed-Sternberg cells. Lab Invest 76:133a, 1997.
3. **Messineo C,** Ozdemerli M, Bagg A, Irving SG, Cossman J. CD40 and Fas signaling in Hodgkin's cell lines. Keystone Symposium on Apoptosis, February 1997.
4. **Messineo C,** Bagg A, Riley C, Fergusson M, Irving SG, He WW, Cossman J. Unique genes detected in cDNA libraries of Hodgkin's cell lines and single Reed-Sternberg cells. Lab Invest 76:130a, 1997.
5. **Messineo C,** Fergusson M, Bagg A, Irving SG, Cossman J. TRAF 3 is degraded after CD40 ligation, Society for Leukocyte Biology Annual Meeting, 1997 **(Oral Presentation)**.
6. **Annunziata CM,** Hurt EM, Staudt LM. C-maf and cyclin D2 in multiple myeloma. Sixth Joint Conference of the AACR and the JCA. January 2004, A38.
7. **Annunziata CM,** Staudt LM. Regulation of the c-maf locus in multiple myeloma. NCI-CCR 5th annual Fellows and Young Investigators Retreat, February 2005.
8. **Annunziata CM,** Davis RE, Gabrea A, Kuehl WM, Staudt LM. NF-kappaB-inducing kinase activates NF-kappaB signaling in multiple myeloma. AACR 97th Annual Meeting, April 2006.
9. Azad NS, Posadas EM, Kwitkowski VE, **Annunziata CM**, Premkumar A, Kotz HR, Barrett T, Sarosy GA, Minasian LM, Kohn EC. Combination anti-VEGF therapy is synergistic: Phase I trial of bevacizumab and sorafenib. ASCO Annual Meeting, June 2006 (Oral Presentation).
10. **Annunziata CM**, Azad N, Dhamoon AS, Whitely G, Kohn EC. Ovarian cancer in the proteomics era. 6th International Symposium on Advanced Ovarian Cancer, European Society for Medical Oncology, March 2007.
11. Azad N, **Annunziata CM**, Kwitkowski VE, Minasian LM, Kotz H, McNally D, Kohn EC. CA-125 does not correlate with disease response in a study of combination anti-VEGF agents. AACR 98th Annual Meeting, April 2007.
12. Azad N, Barrett T, **Annunziata CM,** Minasian LM, Kotz H, McNally D, Chen C, Steinberg S, Kohn EC. A phase I trial of combination anti-VEGF therapy: clinical results and changes in correlative dynamic imaging. ASCO Annual Meeting, June 2007.
13. **Annunziata CM,** Davis RE, Lam LT, Hurt EM, Shaffer AS, Staudt LM. MEK inhibition is selectively toxic to the genetically defined poor prognosis subset of multiple myeloma overexpressing the *c-maf* oncogene." American Association for Cancer Research Annual Meeting, San Diego, CA, April 14, 2008.